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**Second dusk emergence survey of
house and attached barn,
Langley Lane Farm,
Langley Lane,
Middleton,
M24 5LJ**

OS grid reference:
SD 8594 0766

Commissioned-by:
Keith Broome

Survey Date: 24/7/24

Previous surveys: day-time - 16/4/24 (UES), dusk - 30/5/24

Report Date: 14/8/24

Previous reports: day-time - 2/5/24 (UES), dusk - 7/6/24

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Summary.

(This summary should be read in conjunction with the conclusions and recommendations.)

Two dusk-emergence-surveys have now been carried-out on this farmhouse and attached two-storey barn, with further single-storey attachments.

No bats have been recorded emerging but there has been activity by the common pipistrelle at both surveys.

During the survey, the hayloft area of the building adjacent to the east was illuminated, causing a degree of light-spill onto the buildings being surveyed. This was probably not enough to deter roosting in association with the buildings being surveyed. However, it would not have been unreasonable for this building to have been included in the day-time assessment by UES, due to its close proximity to the buildings being developed.

As it wasn't, it's unknown now whether the lighting introduced into the hayloft is impacting a bat roost in that barn. This is only likely if the brown long-eared bat is present as this species flies within the roost and is very sensitive to light pollution. No brown long-eareds have been recorded incidentally, but this species is relatively hard to detect.

I understand the lighting has been introduced for security reasons and is apparently on a timer. In the absence of bat survey work, the timing of its illumination needs to be amended so it doesn't come on until at least 11pm and goes off again by 3am. However, the barn, especially the interior, should now be included in the day assessment as a matter of good practice due to its close proximity to the buildings being developed. No clearance or sweeping-out should take place until the bat survey work has been completed.

Bat roosting potential is to be provided in association with the buildings being developed, so irrespective of the findings of the additional survey work, as control of light-spill onto potential bat roosting features is necessary, a Bat Method Statement should be written for the contractors to work to. This will include drawings illustrating how bat roosting potential will be provided in the course of the development and will incidentally cover precautions with respect to the adjacent barn.

Introduction.

I was engaged to undertake a second dusk emergence survey to accord with good practice, as recommended by UES in early May 2024. This was further to my dusk-emergence-survey on **30/5/24**.

No bats emerged at either dusk survey.

This report should be read in conjunction with both previous reports.

Survey and limitations.

I returned on **24/7/24** to carry out the second dusk emergence survey. I had 4 assistants with me.

We took up fixed positions to watch for bats leaving the building. See Fig 1 below. We all had the use of heterodyne “bat detectors” to help alert us to the presence of bats and to help us distinguish the species present, and synchronised watches to help us piece together the flight paths followed by bats.

Watches are checked as quickly as possible after sighting a bat and times are recorded to the second.

The usual aim of the survey is to position surveyors so that even if areas of roof cannot be seen directly, the building is covered well enough that, by a process of elimination, it can be worked-out whether or not bats emerged or arrived from off-site. This becomes more difficult when conditions darken as the survey progresses.

Accordingly, I also employed four Canon XA10 camcorders with supplementary infra-red lighting to assist with observations in poor light conditions. See Fig. 1 below. Simple heterodyne bat detectors were used alongside the cameras at low volume to provide basic sound recordings of bat activity.

In addition I placed Anabat Swift x 2, Anabat Express and Anabat SD1 x 2 detectors around the building. See Fig 1 below. These record bat calls for analysis on computer later. They are extra tools for helping to confirm the species present.



Fig. 1.

Key: Approximate locations of surveyors shown by red stars,
approximate locations of recording devices shown by yellow crosses,
approximate location of infra-red camcorders shown by orange diamonds.

At the time of the survey there was continuous bright lighting in the hay-loft area of the barn immediately to the east, causing a degree of light-spill onto the buildings being surveyed.

While this is probably insufficient to deter bats from roosting in association with those buildings, it certainly would impact brown long-eared bats if they happened to be roosting in the illuminated building.

Findings.

The main results are shown in Table 1 below:

Table 1. Summary of activity surveys and significant findings

Date	Survey type	Sunset / sunrise time	Time of visual survey	Conditions °C/weather	Comments
24/7/24	dusk	21.18	21.00	17.1°C at start, cloudy, slight breeze, 16.9°C at end	No bats emerged. Common pipistrelle recorded from 21.34. First bat arrived from off-site to the west, suggesting a roost in that direction. Relatively little feeding activity in garden this time but bats flying along eastern side of buildings with some passing over the roofs of the buildings being surveyed. Occasionally two bats recorded at once. See Appendix 1.
30/5/24	dusk	21.26	21.05 to 23.00	14.4°C at start, cloudy, slight breeze, clearing, 12.7 °C at end	Although some bats were recorded flying quite near the buildings, there was no question of any having emerged. All bats recorded were common pipistrelles. The first was recorded at 21.56 at the southern end of the house. This timing suggests the roost was not particularly close. There was frequent feeding activity thereafter by 1 to 2 bats mainly in the unkempt garden area in the south-west of the site, divided from the road by a tall hedge.

Survey type key: **dusk** = dusk emergence survey, **dawn** = dawn re-entry survey

Conclusions/Discussion

No bats emerged but there was activity taking place by the common pipistrelle on site.

During the survey, the hayloft area of the building adjacent to the east was illuminated, causing a degree of light-spill onto the buildings being surveyed. This was probably not enough to deter roosting in association with the buildings being surveyed.

However, it would not have been unreasonable for this building to have been included in the day-time assessment by UES, due to its close proximity to the buildings being developed.

As it wasn't, it's unknown now whether the lighting introduced into the hayloft is impacting a bat roost in that barn. This is only likely if the brown long-eared is present as this species flies within the roost and is very sensitive to light pollution. No brown long-eareds have been recorded incidentally, but this species is relatively hard to detect.

Conversely light spill into the drive between the building may attract insects so may be responsible for the fact more pipistrelles were recorded flying between the buildings at this survey. The pipistrelle is relatively light-tolerant.

I understand the lighting has been introduced for security reasons and is apparently on a timer.

The timing of its illumination needs to be amended so it doesn't come on until at least 11pm and goes off again by 3am, pam. However, the barn should now be included in the day assessment as a matter of good practice.

Bat roosting potential is to be provided in association with the buildings being developed, so irrespective of the findings of the additional survey work, as control of light-spill onto potential bat roosting features is necessary, a Bat Method Statement should be written for the contractors to work to. This will include drawings illustrating how bat roosting potential will be provided in the course of the development and will incidentally cover precautions with respect to the adjacent barn.

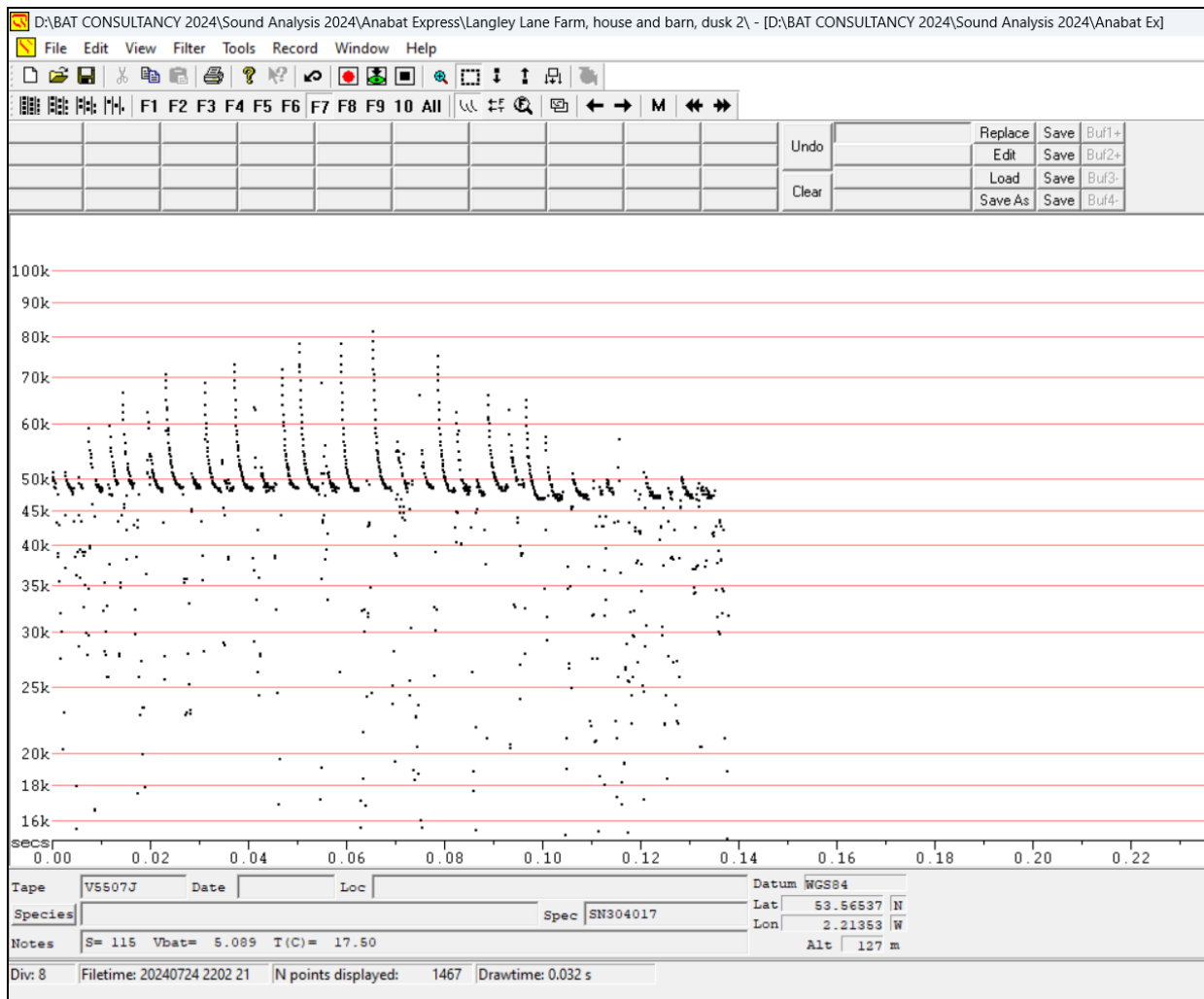
Recommendations.

These recommendations should be read in conjunction with the conclusions above.

Change the timing of the security lighting in the hay-loft of the barn to the east to come on no earlier than 11pm and go off by 3 pending an internal inspection of the building to confirm there is no evidence of roosting by the brown long-eared bat. The exterior should also have a preliminary survey. Do nothing else with respect to the barn until it has been inspected.

Irrespective of the findings, have a Bat Method Statement written to cover the development.

Appendix 1 - Example sonogram/s recorded at dusk/dawn survey



Two common pipistrelles at 22.02